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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/025,143 02/18/98 BURKE

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TM02/0814

EXAMINER

ART UNIT	PAPER NUMBER
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2151
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08/14/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/025,143

Applicant(s)
Burke

Examiner
S. Lao

Art Unit
2151



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on May 24, 2001

2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) 21 is/are allowed.

6) ☒ Claim(s) 1-20 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

19) ☐ Notice of Informal Patent Application (PTO-152)

17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

20) ☐ Other: _____

DETAILED ACTION

1. Claims 1-21 are pending. This action is in response to the appeal brief filed 5/24/2001.

2. The finality of the rejection of the last Office action is withdrawn.

3. Claims 11-20 are rejected under 35 U.S.C. 101 because the invention constitutes functional descriptive material which is non-statutory.

The invention as recited in claim 11 is a software program involving a parser and an object factory. The invention as recited in claim 17 is a software program (software object) involving the use of programming interfaces. The invention as recited in claims 11 and 17 describes and recommends certain characteristics of programs to those types of programs lacking such characteristics. What is claimed is more abstract and less tangible than a "per se" computer program, which by itself is non-statutory.

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over author admitted prior art APA (page 1, line 13 - page 4, line 17) in view of Gamma et al (Design Patterns: Elements of Reusable Object-oriented Software, pp. 97-106).

It is noted that as disclosed 'without translation' refers to using a parser to recognize the syntactic structure of an object invocation. See application as filed, page 6, lines 18-29.

As to claim 17, APA teaches software object (object) comprising an interface (interface) defined in a first notation (implemented in one language/scheme) for manipulating (instantiate, invoke services) an object (objects) at least partially defined in a second notation (implemented in another language/scheme), said second notation being different from (more than one language) said first notation. See page 1, line 13 - page 4, line 17, in particular, page 2, lines 22-26, page 3, lines 30-35.

While APA teaches constructing the object's operations/interfaces from other available operations/interfaces, APA does not teach the construction is without translation.

Gamma teaches object construction (create object via Builder Pattern), wherein an object (product object) is constructed from other available operations/interfaces (BuildPartA(), BuildPartB() of class ConcreteBuilder). See page 98, from section Applicability - page 100, end of section Consequences; page 105, sections Known Uses and Related Patterns. Gamma does not use translation between functions specified and functions available. Instead, Gamma uses a Director/parser to discover required functions (recognize syntactic constructs) and build the object step by step (part by part) from other functions available.

Given the teaching of Gamma, it would have been obvious to manipulate / instantiate the object without translation. The motivations to apply the teaching of Gamma to APA includes that APA desires acquiring function/interface information during object construction/instantiation (page 2, lines 3-8), but does not provide a mechanism to do so, and Gamma on the other hand teaches a mechanism (parser/director) for acquiring function/interface information during object construction/instantiation. Therefore, one of ordinary skill in the art would have been motivated to use the mechanism of Gamma in APA to acquire the function/interface information during object construction.

As to claim 11, APA teaches object definition information (object definition information, page 2, lines 3-8), encapsulating the object definition information (objects implemented in another language, page 2, lines 22-26, page 3, lines 30-35) [it is noted that encapsulating is represented by including functions in the object], object having pre-defined interfaces (object implemented in one language/scheme, page 2, lines 22-26, page 3, lines 30-35). Note discussion of claim 17 with respect to parser for obtaining object definition/function information. APA as modified by Gamma provides means for instantiating/constructing objects (Gamma, object creation/building, discussion of claim 17), which effectively is an object factory by definition.

As to claim 1, note discussion of claim 17 for one or more software objects / software object, at least one interface / an interface, a first notation / a first notation and a second notation / a second notation; and note discussion of claim 11 for object definition information / object definition information and encapsulating / encapsulating. Retrieving

object definition information is met by the operations of parser/director of Gamma, as discussed on claim 17.

As to claim 7, it is basically a method claim of claim 1. Note discussion of claim 1. Further, APA teaches invoking (invoke, page 3, lines 30-35), and APA as modified by Gamma teaches returning without translation (APA: invoke/instantiate an object defined in another language/scheme, and Gamma: instantiate/construct an object with Builder Pattern, as discussed for claim 17).

As to claims 2-4, 8-10, 12, 14, 15, 18-20, APA teaches CORBA IDL (CORBA IDL, page 3, lines 2-5), GDMO (GDMO, page 3, lines 21-29), ASN.1 (ASN.1). APA teaches CORBA IDL as first notation and GDMO/ASN.1 as second notation (page 3, lines 30-35), therefore, it would have been obvious to use the teachings of APA as modified by Gamma to provide the manipulation.

As to claim 5-6, APA teaches a metadata repository (CORBA Interface Repository, page 2, line 6-8), and dynamic gateway for manipulating (dynamically acquire interface definition information, page 2, lines 3-8). Note discussion of claim 17 for first/second notations, objects and invocation. An ORB itself by definition is a dynamic gateway for manipulating/instantiating/invoking objects.

As to claim 13, CORBA Dynamic Skeleton Interface (IDL skeleton) is taught by CORBA 2.0 (page 2-4 of chapter 2), which is included by the APA (page 3, line 3-5).

As to claim 16, APA as modified by Gamma teaches (Gamma) root encapsulator object (director, parser) for resolving object definition name information (recognize syntactic construct of object invocation) into an object reference (using Builder interface) for an encapsulator object (ConcreteBuilder) corresponding to an object definition type (create different representations, page 98, section Applicability).

5. Claim 21 is allowed.


The examiner's reasons for allowance are that the prior art on record does not teach instantiating an object collection of objects corresponding to rules specifying the syntax of an object invocation and determining a set of objects sufficient to construct the object

invocation based on the content of the object invocation and the instantiated object collection. Also note applicant's arguments presented in the appeal brief filed 5/24/2001, page 13, 2nd paragraph, which is persuasive.

6. Applicant's arguments filed 5/24/2001 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (703) 305-9657. A voice mail service is also available at this number. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-9051 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Sue Lao 
August 12, 2001